

**University of Eswatini**  
**Faculty of commerce**  
**Department of business administration**  
**Main examination**  
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Title of the Paper : Operations management 1

Degree : BUS 431 Full time & IDE

Time allowed : Three (3 hours)

Instructions:

1. THIS PAPER CONSIST COMPULSORY CASE STUDY
2. ANSWER ALL QUESTIONS IN THIS PAPER

Note: You are reminded that in assessing your work, account will be given of accuracy of language and the general quality of expression, together with layout and presentation of your final answer.

THIS PAPER MUST NOT BE OPENED UNTIL THE INVIGILATOR HAS GRANTED THE PERMISSION

BE BLESSED AND PROSPER!!!!

## READ THE CASE STUDY AND ANSWER THE QUESTIONS THEREAFTER

### THE EAT 'N ENJOY BAKING COMPANY

#### **The Company**

Eat and Enjoy Baking Company is located in Matsapha Urban area. Two brothers Peter and John formed the company after purchasing cooking franchise, run by the bakery. The franchise assured them of exclusive rights in Gauteng and is one of the largest franchises in Eswatini. The company employs few than 100 people, mainly blue collar workers and atmosphere is informal.

#### **The product**

The company's only product is a soft cookie, of which it makes more than 50 varieties. Larger companies, such as bakeries have the traditionally produced biscuit cookies from which most of the water has been baked out, resulting in crisp cooking. Eat and Enjoy cookies have no additives or preservatives. The high quality of cookies has enabled the company to develop a strong market niche for its product.

#### **The customers**

The cookies are sold in supermarkets throughout Eswatini. Eat 'n Enjoy markets its cookies as 'good food' – no additives or preservatives – and this appeals to a health –conscious segment of the market. Many customers are over 45 years of age and prefer a cookie that is soft and not too sweet. Parents with young children also buy the cookies.

#### **The production process**

The company uses two continuously pans ovens to bake the cookies. The production process is a batch processing system. The process begins as soon as management gets orders from distributors. These orders are used to schedule production. At the start of each shift, a list of the cookies to be made that day is delivered to the person in charge of mixing. That person checks a master list, which indicates the ingredients needed for each type of cookie, and enters that information into the computer. The computer then determines the amount of each ingredient needed, according to the quantity of cookies ordered and relays that information to

storage silos located outside the plant, where the main ingredients (flour, sugar and cake) are stored. The ingredients are automatically sent to giant mixing machines, where they are combined with required amounts of eggs, water and flourings. After the ingredients have mixed, the batter is poured into a cutting machine, which cuts it into individual cookies. The cookies are then dropped into the conveyor belt and transported through one of the two ovens. Filled cookies- such as those filled with lemon cream, strawberry and raspberry – require an additional step for filling and folding.

The non-filled cookies are cut in a diagonal, rather than round, way. The diagonal cut cookies require less space than straight –cut or round cookies and the result s a higher level productivity. The company recently increased the length of each oven by 25 meters, which also increased the rate of production.

As the cookies emerge from the ovens, they are fed onto spiral cooking racks 20 meters high and 3 meters wide. As the cookies come off the cooling racks, workers place the cookies into boxes manually, removing any broken or deformed cookies in the process. The boxes are then wrapped sealed and labeled automatically.

### **Inventory**

Most cookies are loaded immediately onto trucks and shipped to distributors. A small percentage is stored temporarily in the company's warehouse, but the cookies must be shipped as soon as possible because of their limited shelf life. Other inventory includes individual cookie boxes, shipping boxes, labels are recorded frequently in small batches because governmental label requirements are subject to change and the company does not want to get stuck with labels it cannot use. The bulk silos are refilled two or three times a week, depending on how quickly supplies are used.

Cookies are baked in a sequence that minimizes downtime for cleaning. For instance, light colored cookies (for example fudge), and oatmeal cookies are baked before oatmeal raisin cookies. This permits the company to avoid having to clean the processing equipment every time different type of cookie is produced.

### **Quality**

The bakery prides itself on the quality of its cookies. A quality control inspector samples the cookies at a random as they come off the line to assure that they taste and constancy are satisfactory and that they have been baked to the proper degree. Also workers on the line are responsible for removing defective cookies when they spot them. The company has also installed a X-ray machine on the line that can detect small bits of metal fillings that may have got into cookies during the production process. The use of automatic equipment for transporting raw materials and mixing batter has made it easier to maintain a sterile process.

### **Scap**

The bakery is run very efficiently and has minimal amounts of the scrap. For example, if a batch is mixed improperly, it is sold as dog food. Broken cookies are used in the oatmeal cookies. These practices reduce the cost of ingredients and save on cost of waste disposal. The company also uses heat reclamations; the heat that scrap from the ovens is captured and used to boil the water that supplies the heat to the building. Also, the use of automation in the mixing process has resulted in a reduction in waste compared with the manual methods used previously.

### **New products**

Ideas for new products come from customers, employees, and observations of competitors' products. New ideas are first examined to determine whether the cookies can be made with existing equipment. If so, a sample run is made to determine the cost and time requirements. If the results are satisfactory, marketing tests are conducted to see if there is a demand for the product.

### **Potential improvements**

There are number of areas of potential improvement at the bakery. One possibility is automating the packaging of the cooking into boxes. Although labour costs are not high-automating the process might save time and money and increase efficiency. So far, the owners have resisted making this change because they have feel an obligation to the community to employ the 30 women who are now do the boxing manually. Another possible improvement is to use suppliers located closer to plant than the suppliers the company currently uses are located .This will reduce delivery

lead times and transporting costs but owners are not convinced that local suppliers could provide the same good quality. Other opportunities have been proposed in recent years, but the owners rejected them because they feared that the quality of the product might suffer.

### **Answer all questions**

#### **Question 1**

Based on the company profile, product and customers Eat 'n Enjoy Bakery Company requires improve product life cycles. Explain to John and Peter how they could use product to service life cycle strategies to improve performance of Eat 'n Enjoy Bakery? **25 marks**

#### **Question 2**

After reviewing inventory and scraps, discuss any five determinants of effective capacity should have considered before venture into the franchise of cookies bakery? **25 marks**

#### **Question 3**

Considering the production process and quality of product and services by of Eat 'n Enjoy Bakery Company offers, explain to Peter and John the 4 advantages and 6 disadvantages product layout? **25marks**

#### **Question 4**

Eat 'n Enjoy has potential to improve their business through introducing the new products. Discuss with Peter and John how operations and marketing could influence the competitiveness of Eat 'n Enjoy bakery? **25 marks**

**TOTAL MARKS 100**